Vidifox® Document Camera

DV 550S

USER MANUAL



Please read this User Manual thoroughly before you use the document camera. Keep the CD-ROM in a convenient place so you can use it quickly if you need to.

Please visit us at http://www.waninusa.com where you can get product support, the latest driver updates, and answers to frequently asked questions (FAQs) and technical questions.

PRECAUTIONS



NOTICES: PLEASE READ CAREFULLY BEFORE USE

- Use the document camera under the rated electric conditions.
- Do not place the document camera on any unstable surface. It may fall and cause injuries or damages.
- Do not place this device directly under sunlight or near heaters.
- Do not place this device near water.
- Keep the camera away from acid or alkali gas.
- Do not place this document camera in humid, dusty, windy or vibrant locations.
- The recommended operating environment is:

  Temperature: 32ºF-113ºF (0ºC--45ºC)

  Humidity: less than 75%
- Always unplug BEFORE cleaning the device. Use a damp soft-cloth for cleaning. Do not use volatile solvent.
- When this equipment functions abnormally, such as smoke, smell, noise, immediately unplug and call for professional assistance.
- Unplug the document camera or shut off the power when not in use.

Legal Notice

FCC Part 15

This device complies with Part 15 of the FCC Rules. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

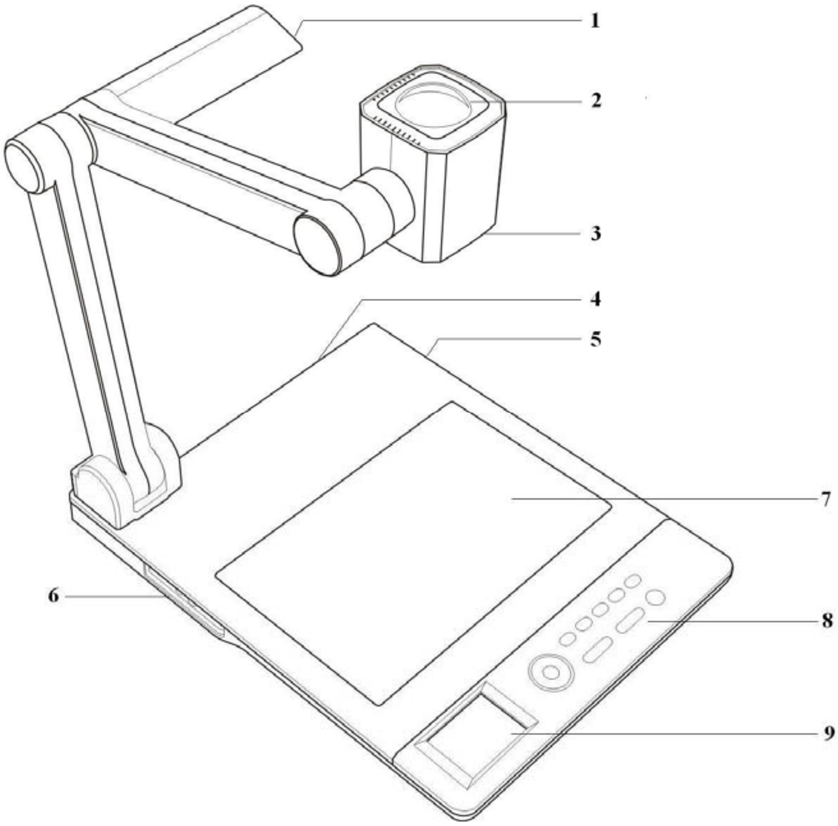
Compilation and Publication Notice

This manual has been compiled and published to cover the latest product’s descriptions and specifications. The contents of this manual and the specifications of this product are subject to change without notice.

Wanin USA reserves the right to make changes without notice in the specifications and materials contained herein and shall not be responsible for any damages (including consequential) caused by reliance on the materials presented, including but not limited to typographical and other errors relating to the publication.

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3. **Camera**
4. **Rear panel**
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6. **Side panel-2**
7. **Base light**
8. **Control panel**
9. **LCD screen**

2. CONTROL PANEL



1.  : Turn on/off the power.
2. **MENU ENTER**: Enter the On-Screen Menu.
3. **HOME**: Output the image from the camera.
4. **PC**: Output the signal from VGA input.
5. **VIDEO**: Output the signal that from the C-Video/S-Video input.
6. **LAMP**: Turn on/off the LED light.
7. **AUTO**: Carry out auto focus, color adjustment and white balance.
8. **FOCUS**: Adjust focus manually, focus far and focus near.
9. **ZOOM**: Image zoom in and zoom out control.

3. INPUTS AND OUTPUTS

Rear Panel



Side panel-1



Side panel-2



1. **DC 12V**: Power input.

2. **RS 232**: Serial port, to control the document camera by a computer via this port.

3. **COMPUTER & AUDIO IN**: Computer signal (and audio signal) input.

4. **COMPUTER OUT**: Output the signal that from the COMPUTER IN connector.

5. **DVI OUT**: DVI signal output (DVI-A).

6. **AUDIO OUT**: Audio output.

7. **PROJECTOR OUT**: Output the signal to a projector or other display.

8. **USB-A**: Communicate with USB device, such as USB mouse or USB drive.

9. **RGB & AUDIO IN**: RGB signal (and audio signal) input(15 pin D-SUB).

10. **USB-B**: Capture image into a connected computer via provided software.

Download the saved images from internal memory to computer.

11. **C-VIDEO OUT**: Composite video output.

12. **S-VIDEO OUT**: S-Video output.

13. C**-VIDEO & AUDIO IN**: Composite Video signal (and audio signal) input.

14. **MIC**: Microphone input.

15. **S-VIDEO & AUDIO IN**: S-Video signal (and audio signal) input.

4. REMOTE CONTROL



1. **Save**: Capture the image in display**.**

2. **Recall**: a. Image recall mode enabled, display the saved images.

   b. When a USB drive is connected, press Recall to show the content that in the USB drive.

   c. Back to upper level in Image Recall mode.

3. **Title**: Enable the title function (title freezing).

4. **Split**: Split screen, enable the comparison between the frozen image and live image.

5. **Neg**: Switch the image mode between positive and negative.

6. **Rotate**: Rotate the image by 90°, 180°, 270°.

7. **Freeze**: Freeze/unfreeze the image.

8. **PIP**: Active the Picture in Picture function.

   a. Press Recall button, then use arrow button to select a saved image, press PIP to choose it for PIP image.

   b. Press Recall to exit the image recall mode, press PIP again, then a small window will appear on the lower right corner, showing the selected saved image.

9. **Page +/-**: Page up and page down in Image Recall mode.

10. **Home**: Output the image from the camera.

11. **Red**+/-: Image color adjustment (red).

12. **SXGA/XGA**: Switch the output format between SXGA and XGA.

13. **Blue**+/-: Image color adjustment (blue).

14. **PC 1/2**: Switch the input between PC1 and PC2.

15. **Video 1/2**: Switch the input between Video1 and Video2.

16. **Menu Enter**: a. Active the on-screen menu.
b. Display the selected image in Image Recall mode.

17. **Arrow buttons**: a. Move the cursor when the on-screen menu is activated.
b. Navigate between image thumbnails in Image Recall mode.

18. **USB**: Switch the USB function between USB camera (capture the image from camera to PC and USB storage (download image from camera to PC).

19. **Zoom+/-**: Image zoom in and zoom out control.

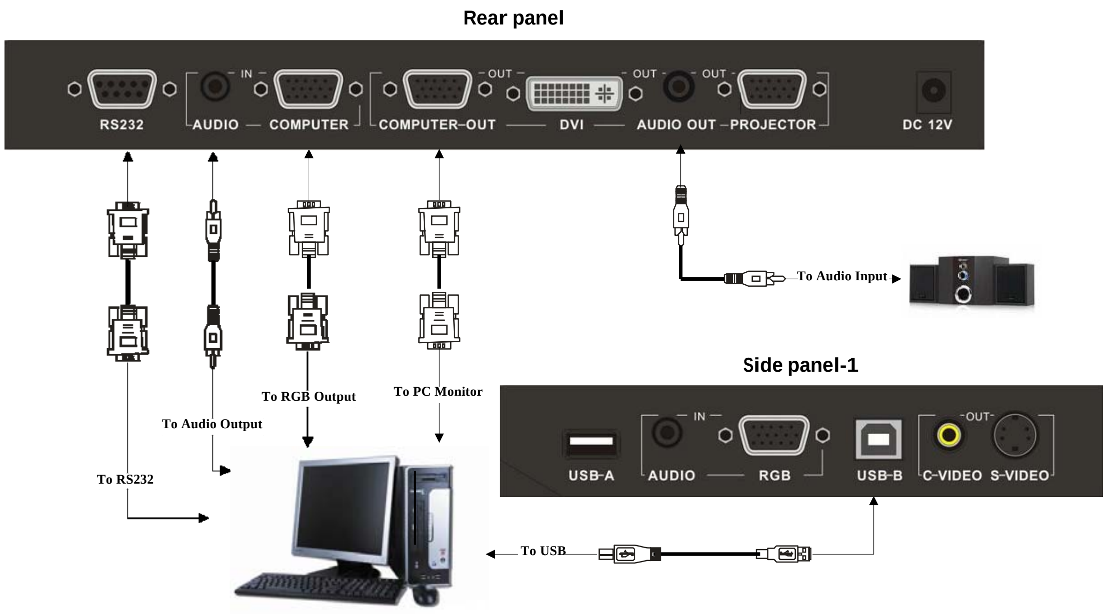
20. **Auto**: Carry out auto focus, color adjustment and white balance adjustment.

21. **Focus+/-**: Adjust focus manually, focus far and focus near.

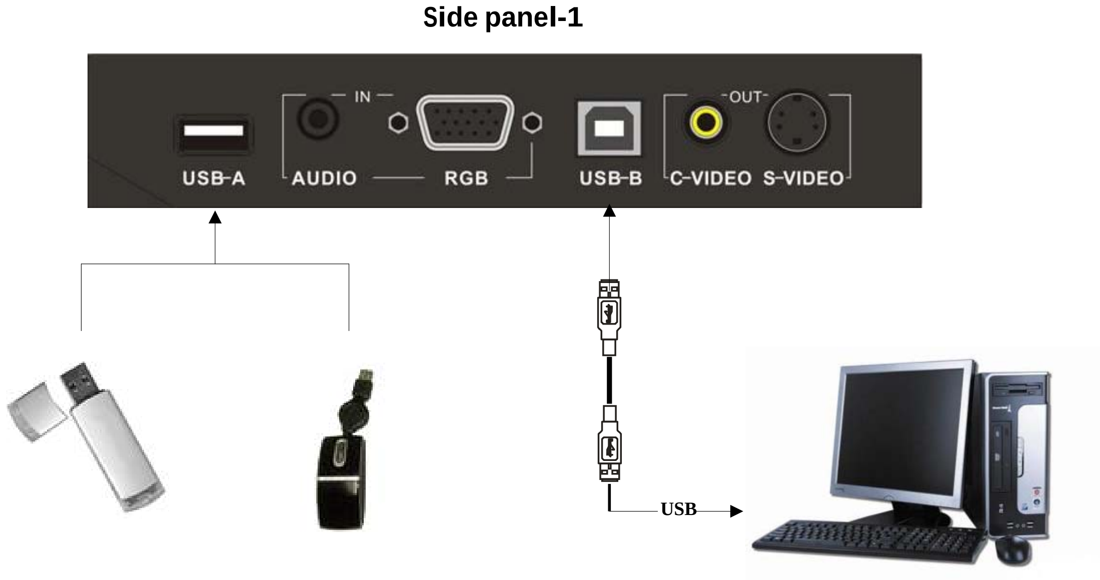
22. **Bright+/-**: Image brightness adjustment.

5. CONNECTIONS

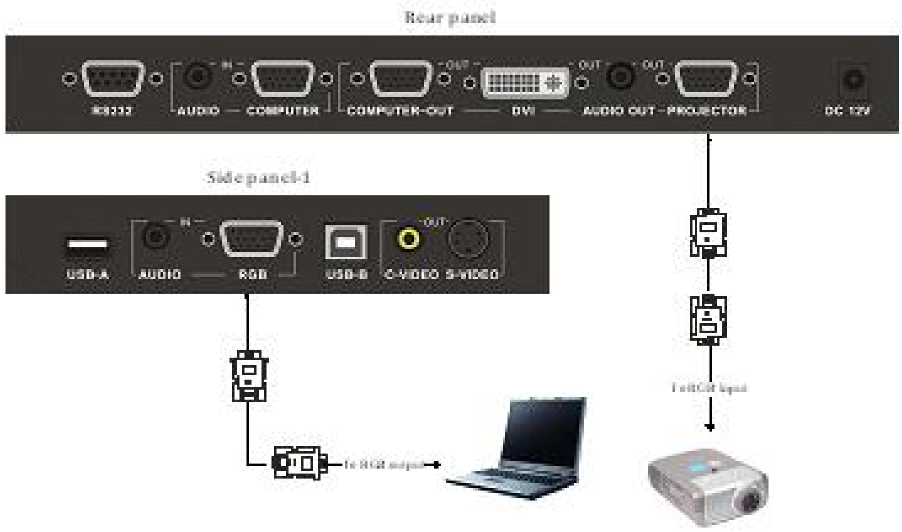
5.1. COMPUTER CONNECTION



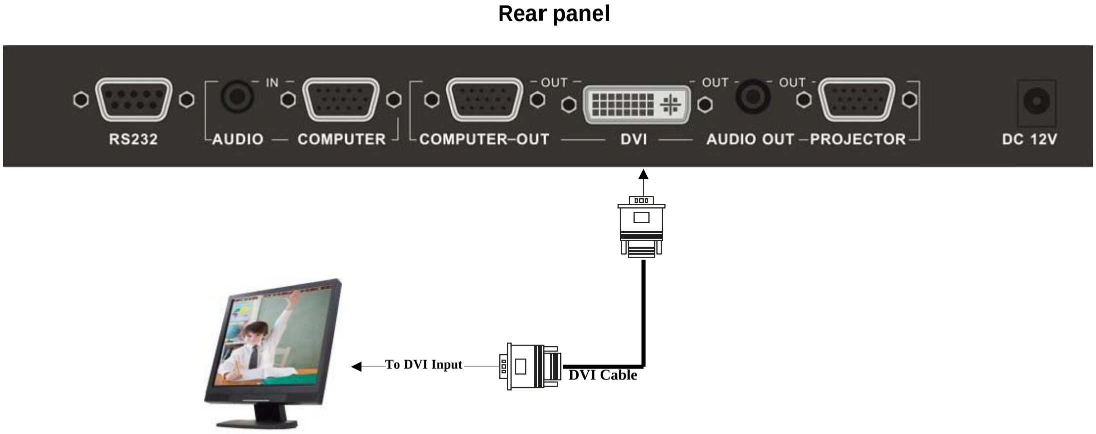
5.2. USB CONNECTION



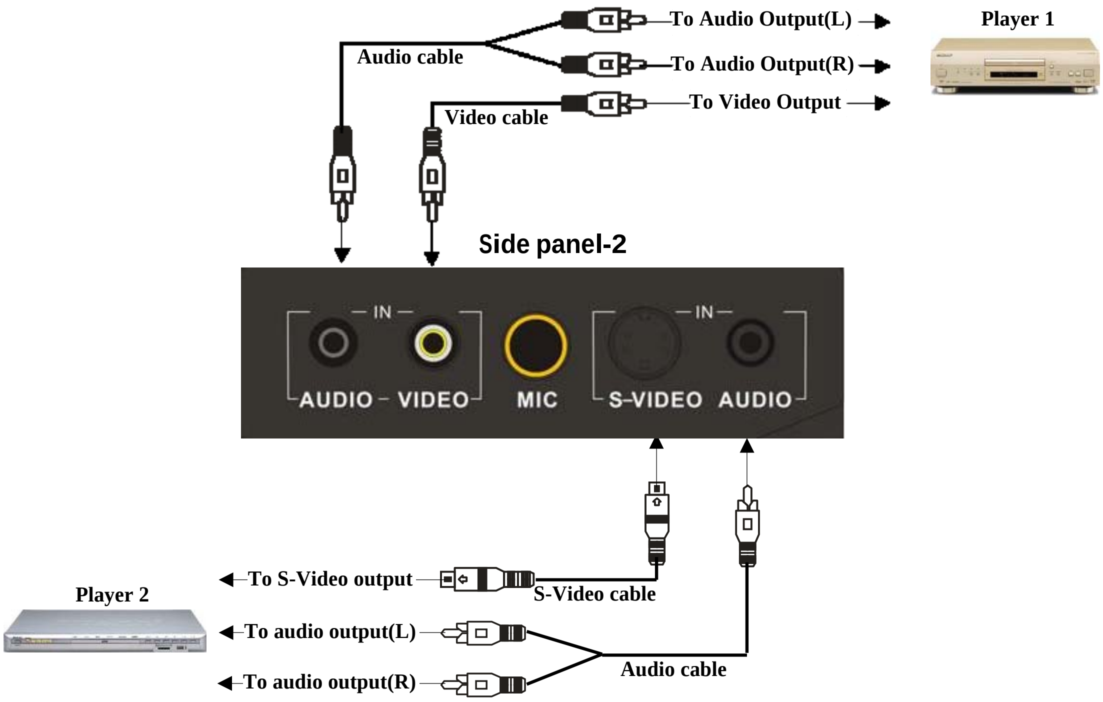
5.3. RGB INPUT AND OUTPUT



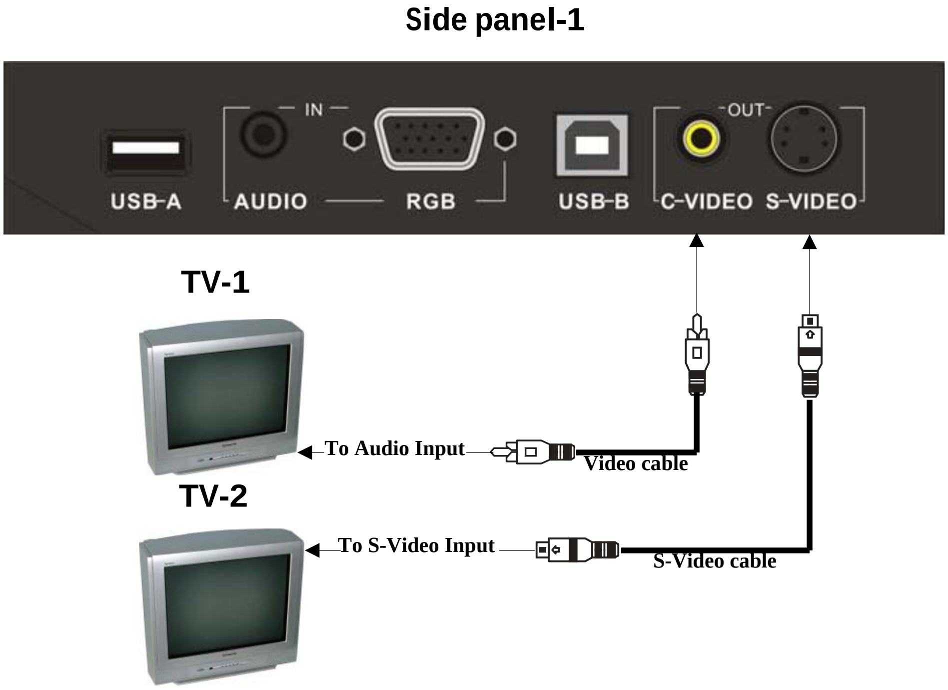
5.4. DVI OUTPUT



5.5. C-VIDEO & S-VIDEO INPUT



5.6. C-VIDEO & S-VIDEO OUTPUT



6. RS232 SOFTWARE

6.1. COMPUTER REQUIREMENTS

The PC's hardware and software configurations shall not be less than the following requirements：

Operating system: Windows XP

CPU: 1.8GHz

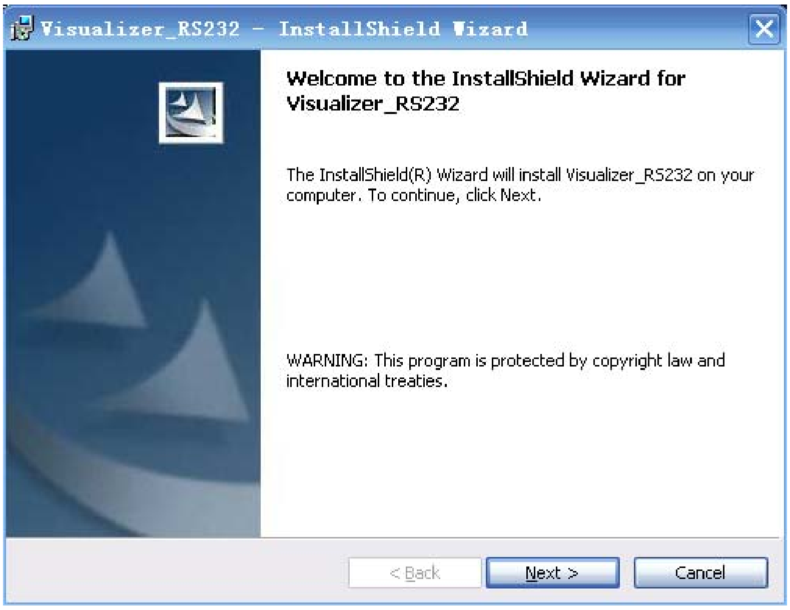
Physical memory: 512M

Video memory: 64M

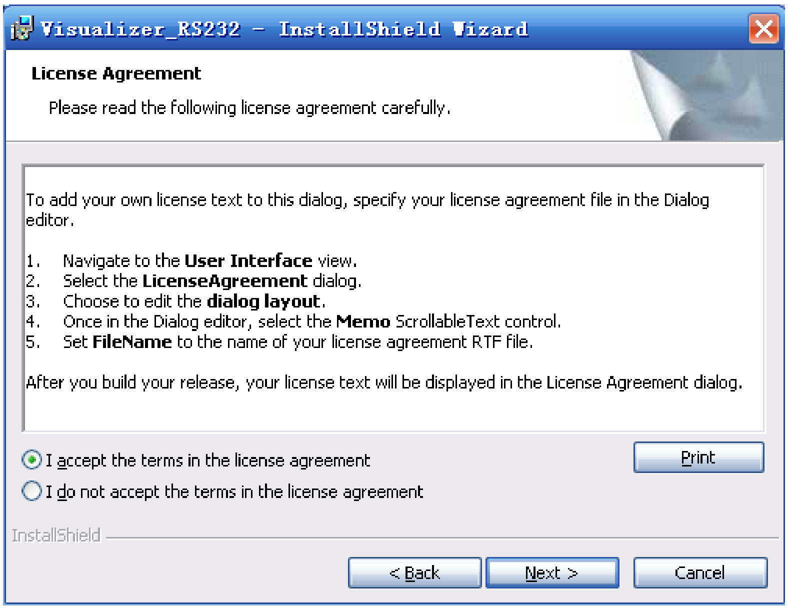
6.2. SOFTWARE INSTALLATION

Double click the RS232 software in provided CD to run the install shield wizard.

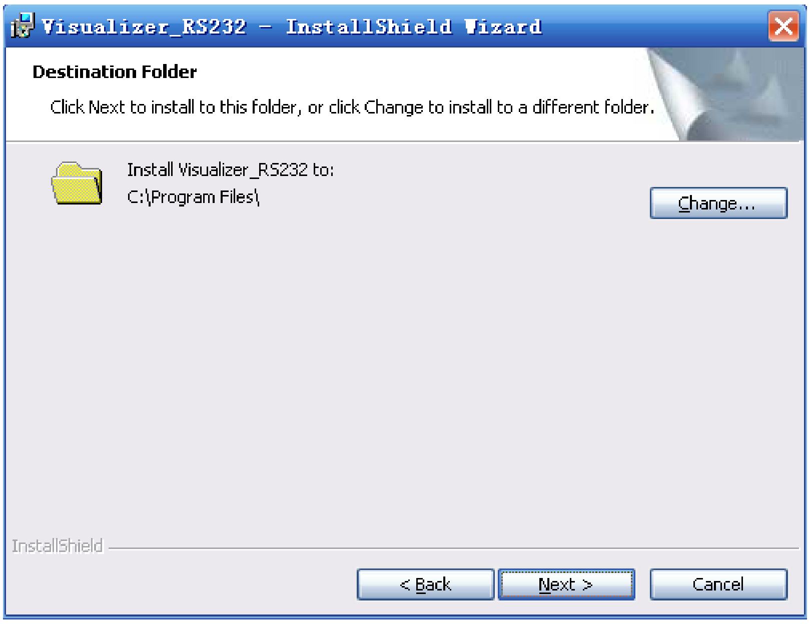
Then you will see the software setup window:



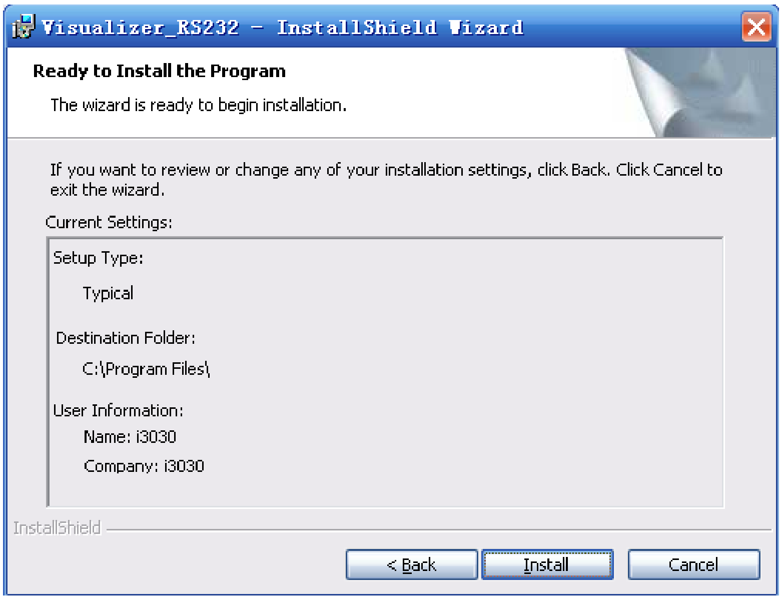
Read terms, select *"I accept the terms in the license agreement*" Click *Next*:



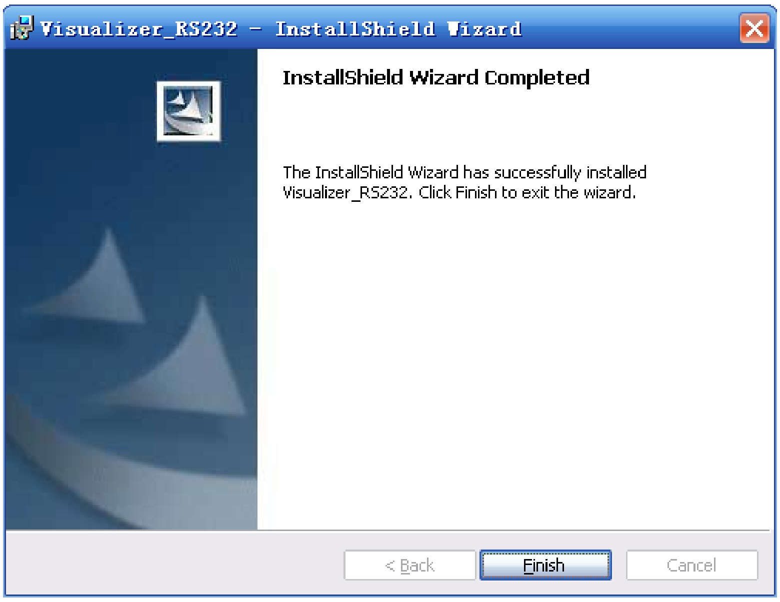
Click *Change* to change the installation directory if needed, then click *Next*:



Click *Install* to install the software to the computer:

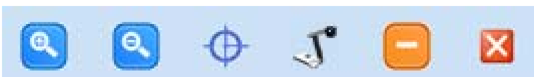


Click Finish, the software installation is complete:



6.3. SOFTWARE SETTINGS

Connect the computer and the DV 550S with a RS232 cable, turn on the power of DV 550S, then double click on  or click *start->All Programs->Visualizer_RS232-> Visualizer_RS232.exe* to run the RS232 software, you will see the Icon  on the task bar and the control interface on the top right of the screen:



: Zoom+

: Zoom-

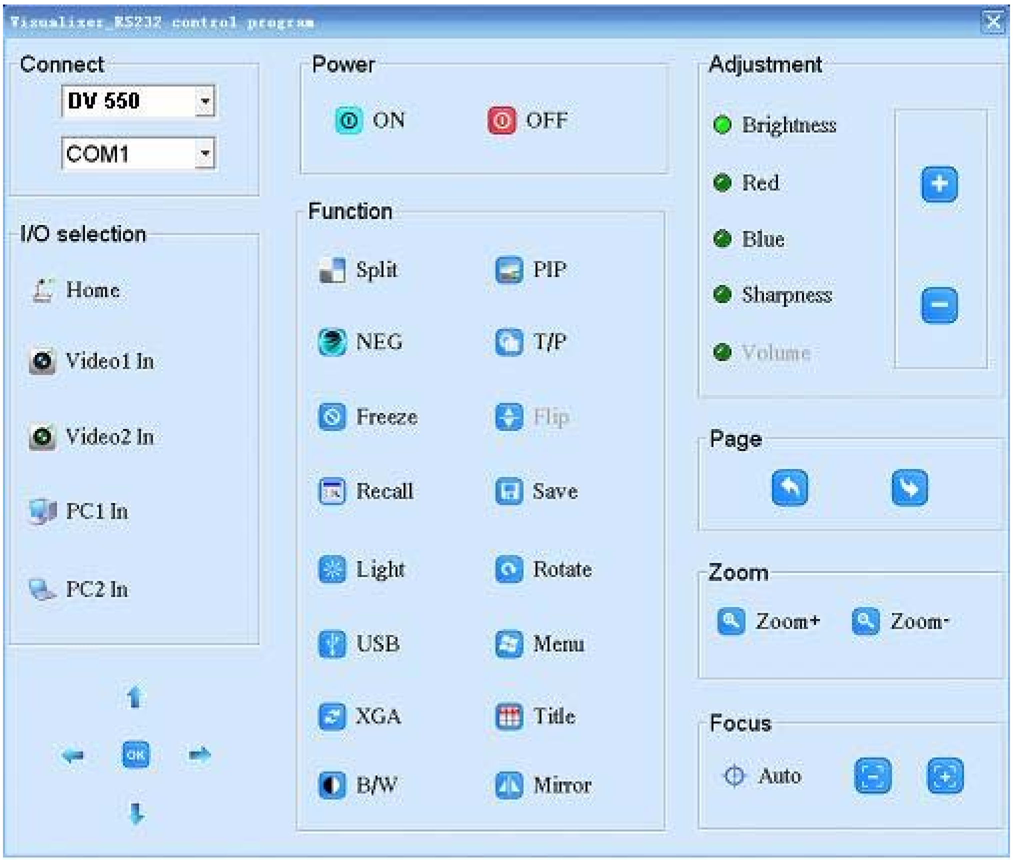
: Auto

: Display all functions

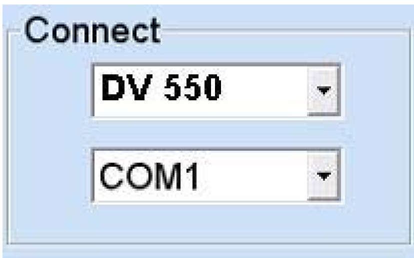
: Minimize

: Close

Click on , you will see the following control panel.



Setup the software properly:



Select corresponding model number.

Select the right COM port

Note:

** If the selected model does not have certain functions, the corresponding buttons in the software interface are displayed in light gray and are not clickable.*

** All models require 15 seconds start-up time to start the software.*

6.4. BUTTON INSTRUCTION

Button	Function
Power On	Power the unit on
Power Off	Stand by
Home	Visualizer output mode
Video1 In	Video 1 input
Video2 In	Video 2 input
PC1 In	PC1 input
PC2 In	PC2 input
Freeze	Image freeze
Light	Toggle between arm light, backlight and light off modes
Brightness+	Increase the brightness
Brightness-	Decrease the brightness
Focus+	Focus far
Focus-	Focus near
Zoom+	Zoom in
Zoom-	Zoom out
Page+	Page up
Page-	Page down
Red+	Increase the red hue
Red-	Decrease the red hue

Blue+	Increase the blue hue
Blue-	Decrease the blue hue
Sharpness+	Increase the sharpness
Sharpness-	Decrease the sharpness
Auto	Auto focus, brightness and color
Save	Save image
Recall	Recall saved images
NEG	Switch between negative and positive modes
B/W	Switch between black/white and color modes
Split	Split screen
Mirror	Mirror image
T/P	Switch between text and image modes
Rotate	Rotation
PIP	Picture in picture
XGA	Switch between SXGA, XGA, and WXGA output modes
Enter	Enter
Up	Up
Down	Down
Left	Left
Right	Right
USB	USB function selection
Title	Title freeze

Menu	Menu

7. USB FUNCTION

7.1. USB-A

USB-A connector can be used to communicate with USB mouse and USB stick or other USB slave device.

1. USB mouse
   The USB mouse will be automatically activated when plug into the USB-A connector of DV 550S, you can use it to annotate on the image.

2. USB stick
   * Connect the USB stick with DV 550S, then press Recall button to access the USB stick.
   * Use the left and right arrow to exit/enter a folder.
   * Use the up and down arrow button to select an image.
   * Press Menu Enter to display the selected image.
   * Press Recall button to exit.

7.2. USB-B

7.2.1. COMPUTER REQUIREMENTS

Visualizer_USB Camera software is an application that allows users to capture images, preview and record video under the Windows operating systems.
Visualizer_USB Camera software runs on MS Windows XP, Windows 7, and Vista operating systems. The minimal requirements for the computer hardware are:

Operating system: Windows XP

CPU: 1.8 GHz

Physical memory: 512M

Video memory: 64M

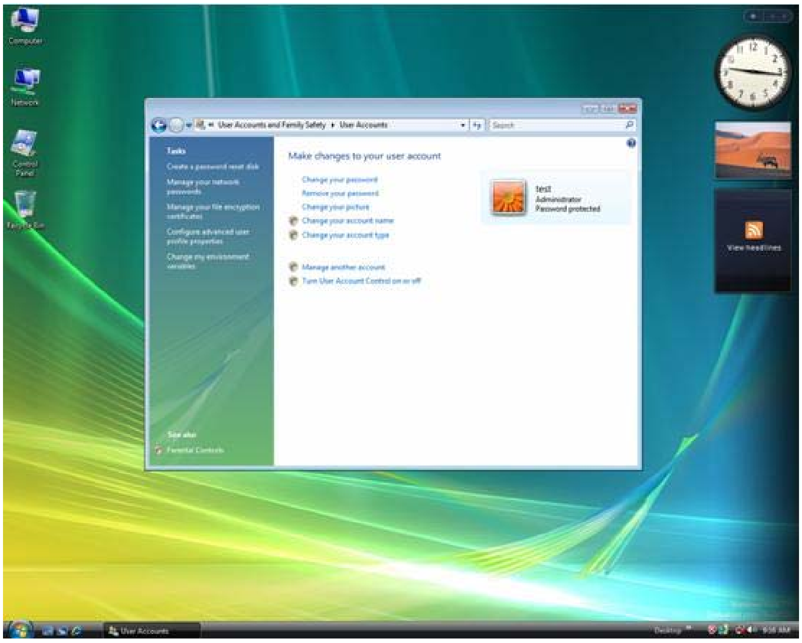
7.2.2. PREPARATION FOR INSTALLATION

To install and uninstall, please login in as system administrator, otherwise, the install/uninstall will fail.
Please connect the unit to the PC before starting installation.
Please select the right software to install: Visualizer_USB(x32): Windows XP, 32bit. Visualizer_USB(Windows7 x64): Windows 7, 64bit.

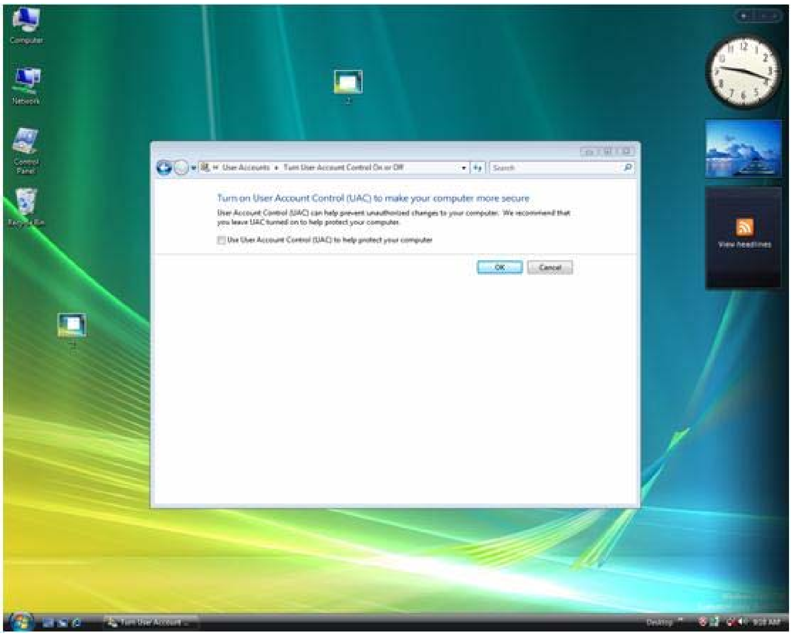
Visualizer_USB(Vista x64): Windows Vista, 64bit.

For Vista system, please do not choose "Use User Account Control (UAC) to help protect your computer", follow the step to complete the setting:

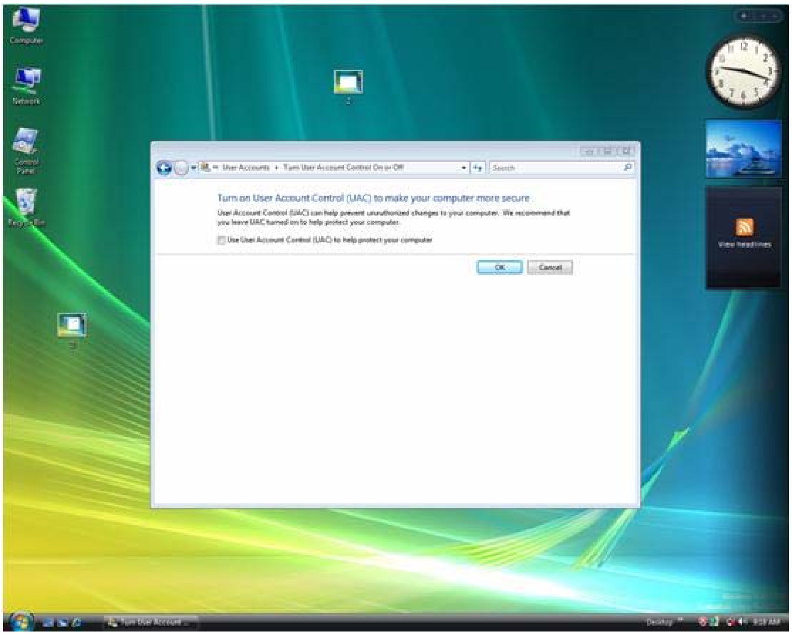
1. Open the control panel, then click User accounts:



2. Click on "Turn User Account Control on or off", you will see:

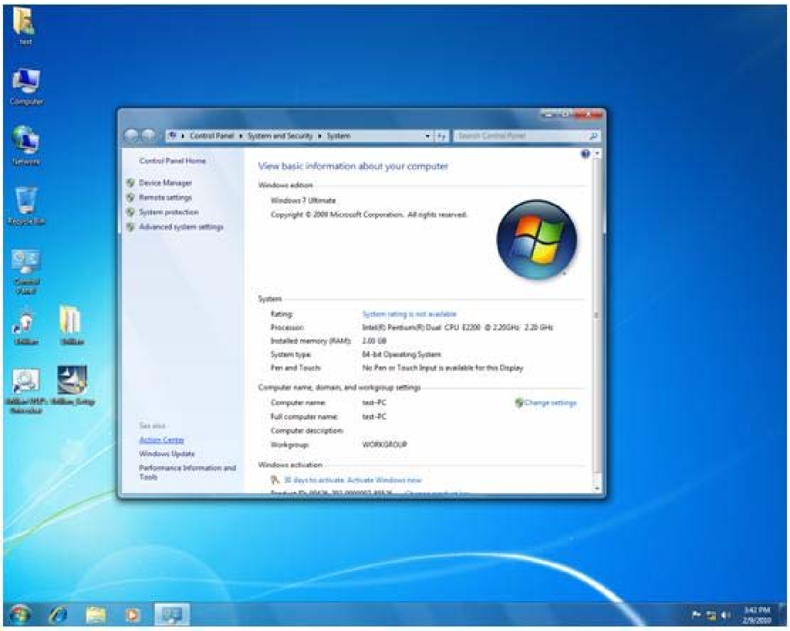


3. Do not tick the option “Use User Account Control (UAC) to help protect your computer”:

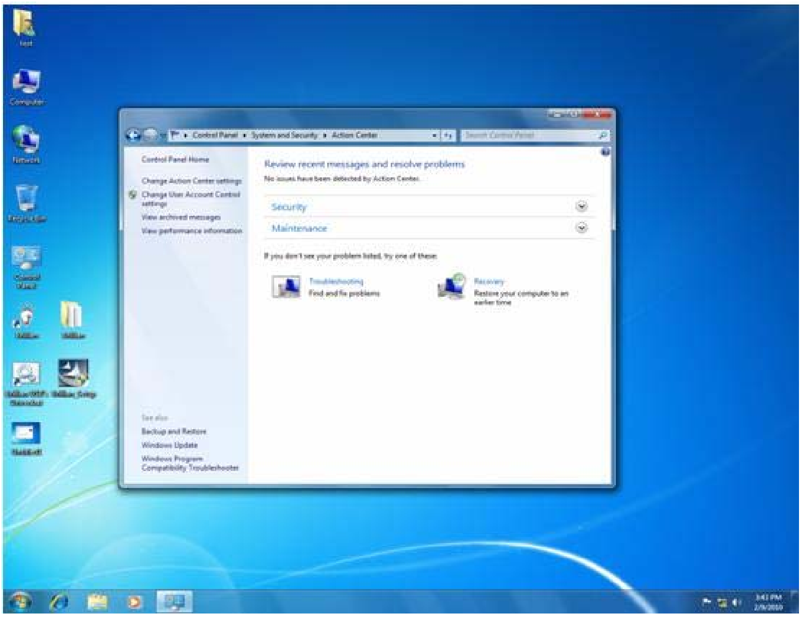


For Windows 7, please change the User account control setting to Never Notify. Follow the step to complete the setting:

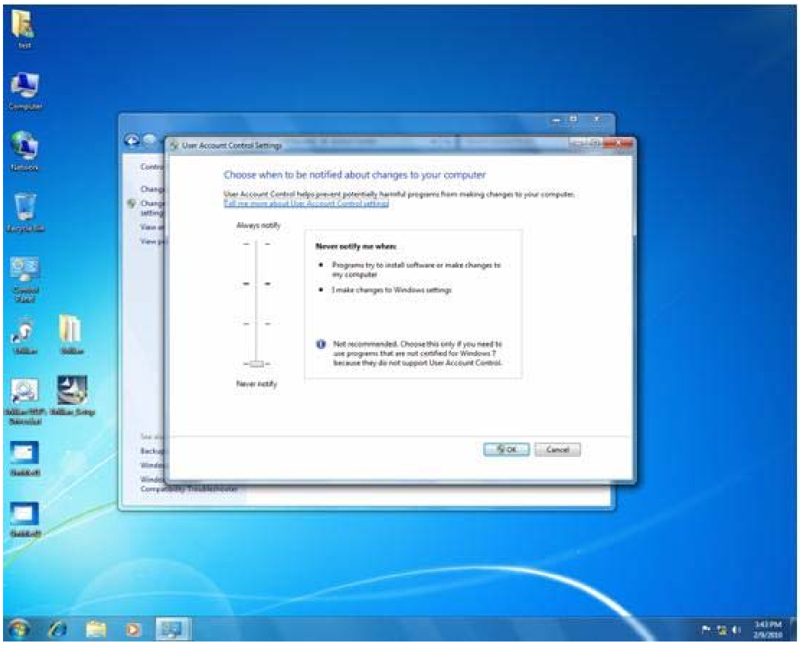
1. Click on the right key of the mouse, choose properties:



2. Click on Action center:



3. Click on Change User Account Control Setting, then choose Never notify.

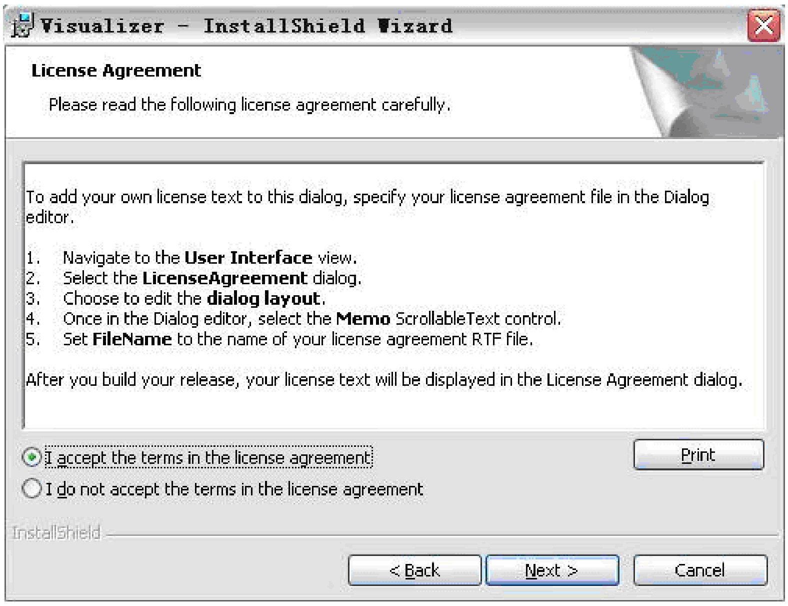


7.2.3. SOFTWARE INSTALLATION

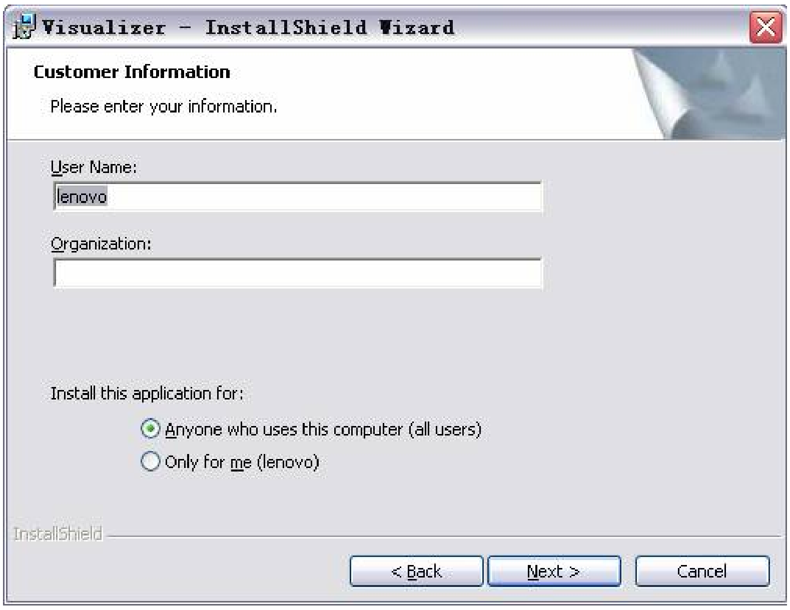
Double click to run the software installation package, the following dialogue appears, click "Next":



Read the terms, select "I accept the terms in the license agreement." Click "Next", as the following figure.



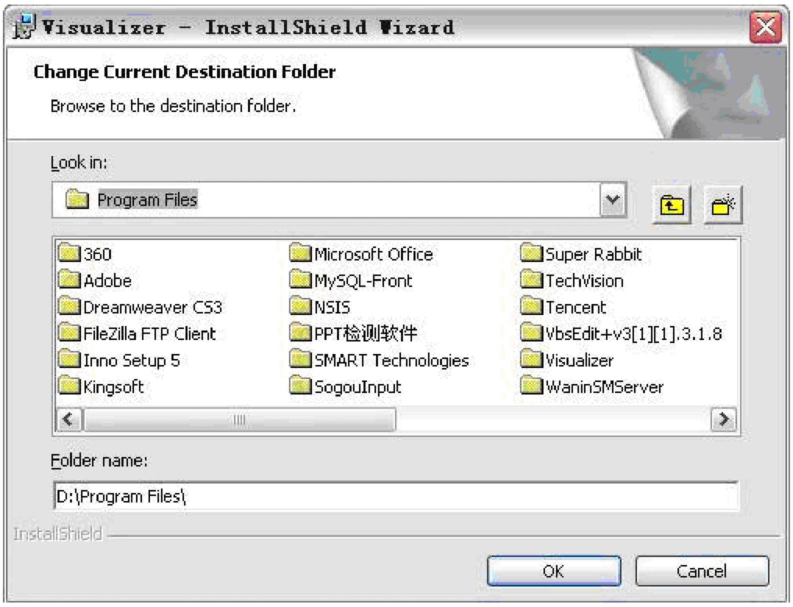
The following dialogue box appears, click "Next":



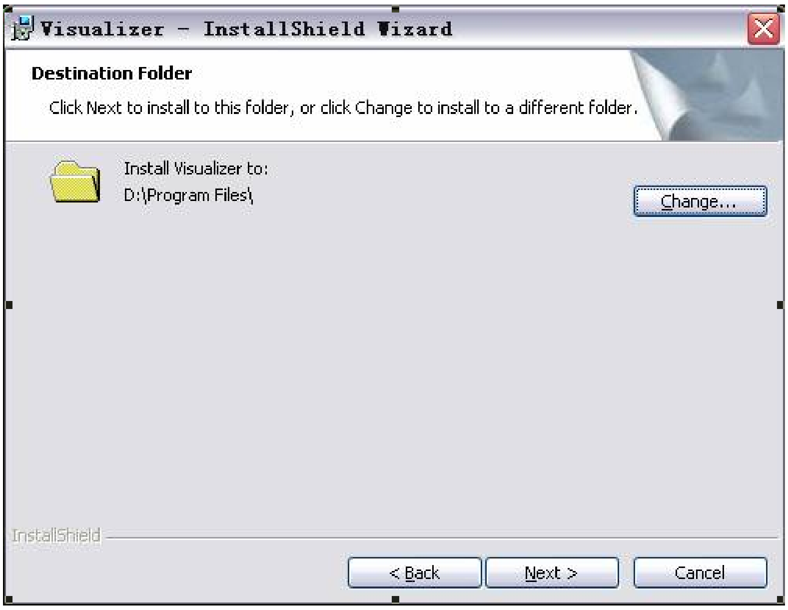
The default installation directory is Program Files, C: \ Program Files \, you can select a different installation directory, as shown:



Click on "Change" to change the directory, as shown:



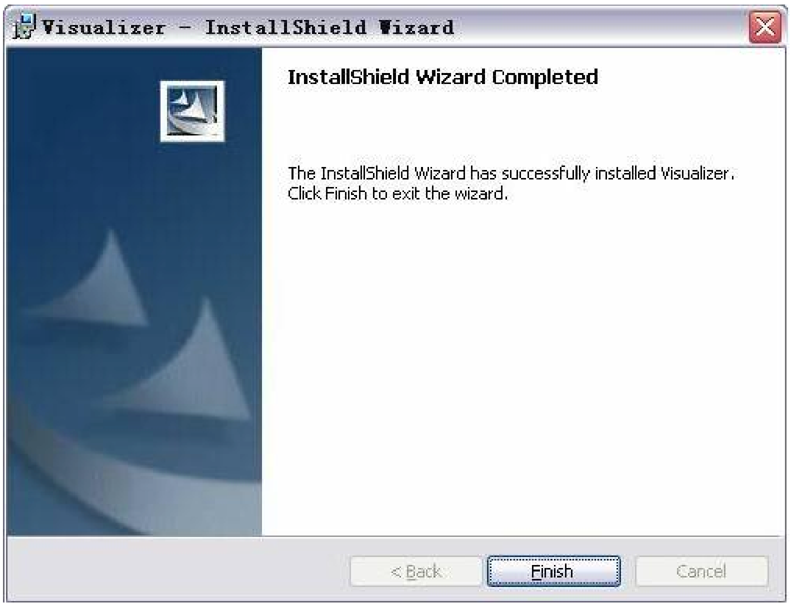
Click on "OK", the following figure appears. Click "Next".



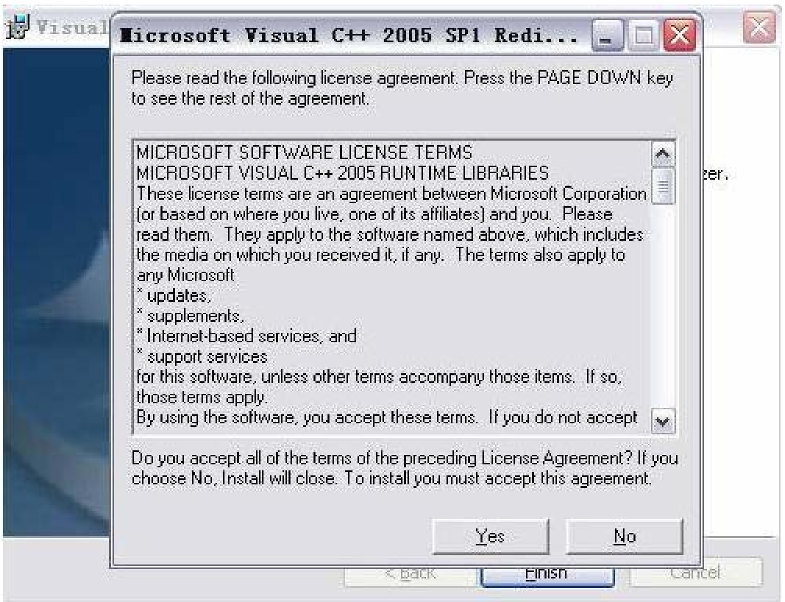
Click on "Install" to complete installation, as shown:



Click on "Finish" to complete the installation, as shown:



Then you will see the following interface, which is an installation package for 2005 environment. If your PC already has this installed, click on "No" to exit, otherwise, click on "Yes" to install it.



7.2.4. START THE SOFTWARE

Note: To use the software, the document camera's USB mode has to be set to USB Video mode. Please follow the instruction below:

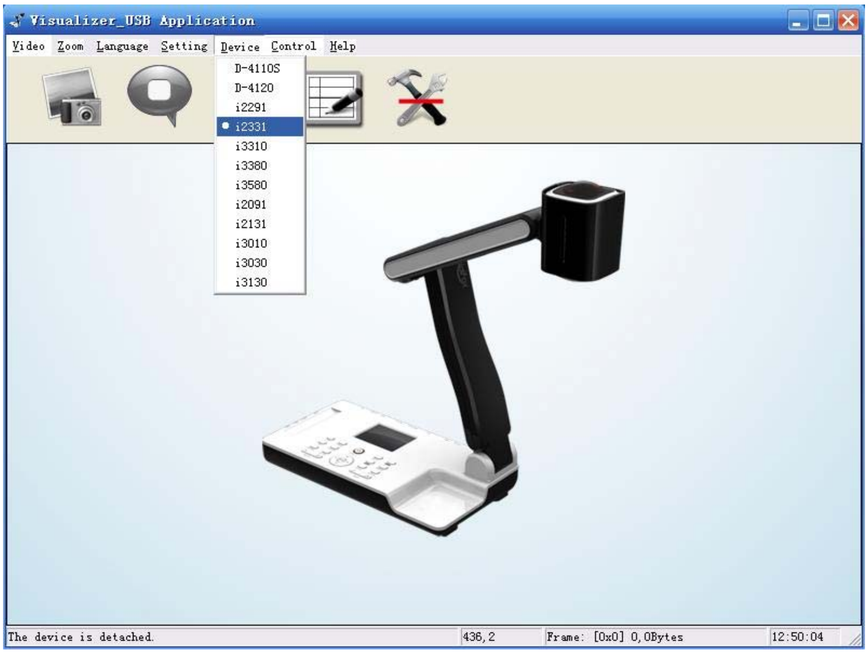
A. Make sure the USB cable is disconnected from the unit.

B. Press the USB button on the remote, a dialog box appears on the screen, under which you will see USB disk or USB video, use the arrow keys on the remote or control panel to select the USB video mode.

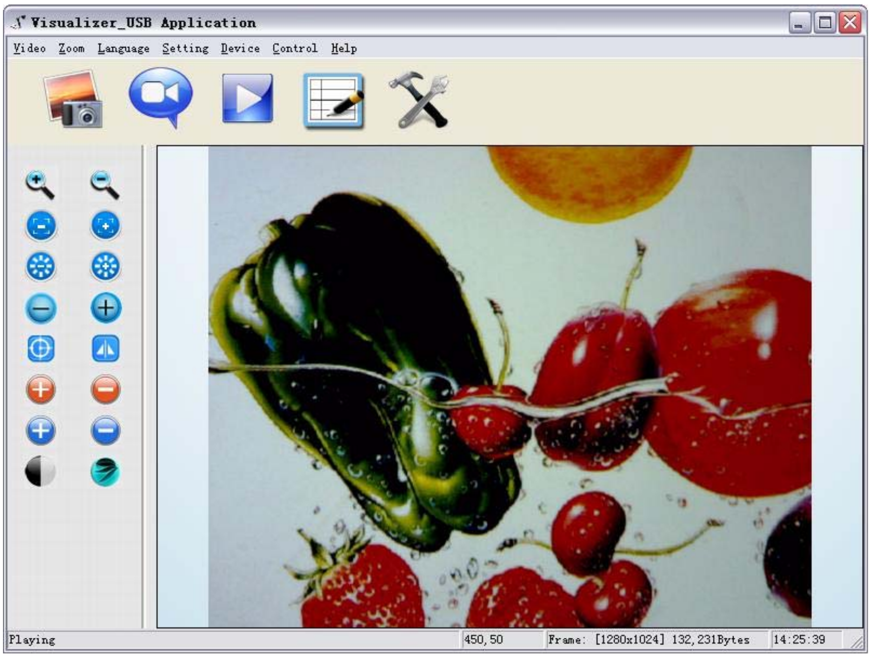
The remote and the front panel are inactive while the software is in use.

Double click on the short cut 

on the desktop, then click on *Device*, select the right model number, see below:



Then click on , or select Video->Play, you will see the interface:



7.2.5 IMAGE CONTROL

- **Zoom in and Zoom out**

Zoom In （Ctrl+I）: Left-click the Zoom In command button to enlarge the image.

 Zoom Out（Ctrl+O）: Left-click the Zoom Out command button to shrink the image.

- **Focus adjustment**

 F ocus Far（Ctrl+R）: Left click the Focus Far command button to focus far.

 Focus Near（Ctrl+N）: Left click the Focus Near command button focus near.

- **Image Brightness adjustment**

Bright More （Ctrl+B）: Left click the Bright More button to increase the brightness.

 Bright Less （Ctrl+L）: Left click the Bright Less button to reduce the brightness.

- **Sharpness adjustment**

Sharp More: Left click the Sharp More button to increase the sharpness.

Sharp Less: Left click the Sharp Less button to reduce the sharpness.

- **Auto focus**

Auto （Ctrl+U）: Left click the Auto button to auto adjust the focus.

- Mirror adjustment

 Mirror（Ctrl+M）: Left click the Mirror button to adjust image to normal mirror, horizontal mirror, vertical mirror, and horizontal /vertical mirror.

- **Image red hue adjustment**

 Red More: Left click the Red More button to increase the red hue.

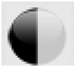
Red Less: Left click the Red Less button to reduce the red hue.

- **Image blue hue adjustment**

Blue More: Left click the Blue More button to increase the blue hue. Blue

Less: Left click the Blue Less button to reduce the blue hue.

- **Image black and white/ color adjustment**

 Mono/Color（Ctrl+K）: Left click the Mono/color button to toggle between the

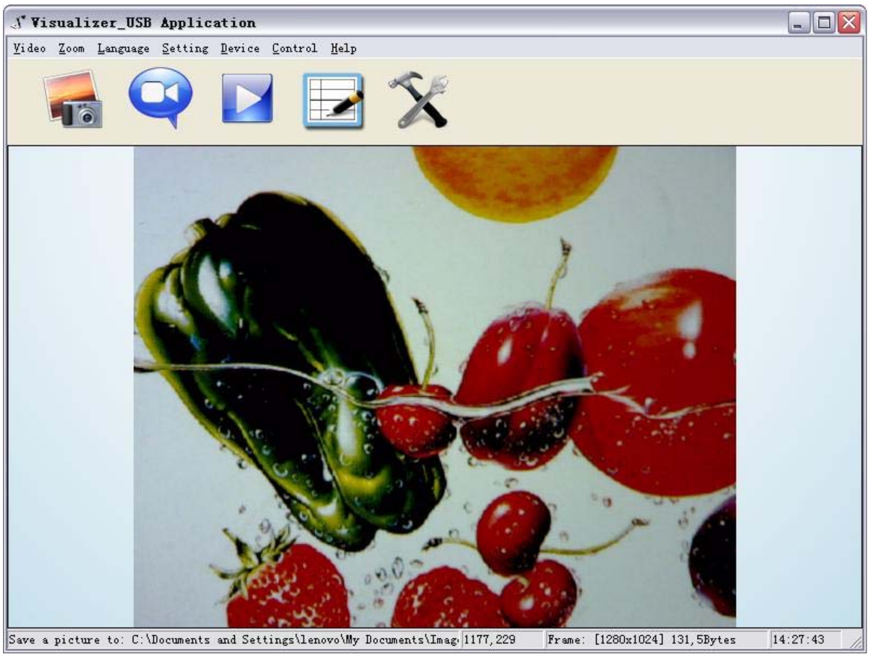
black-white and color modes.

- **Positive and negative film images**

Neg（Ctrl+G）: Left click the Neg button to toggle between the positive and negative modes.

7.2.6. IMAGE CAPTURE AND VIDEO RECORDING

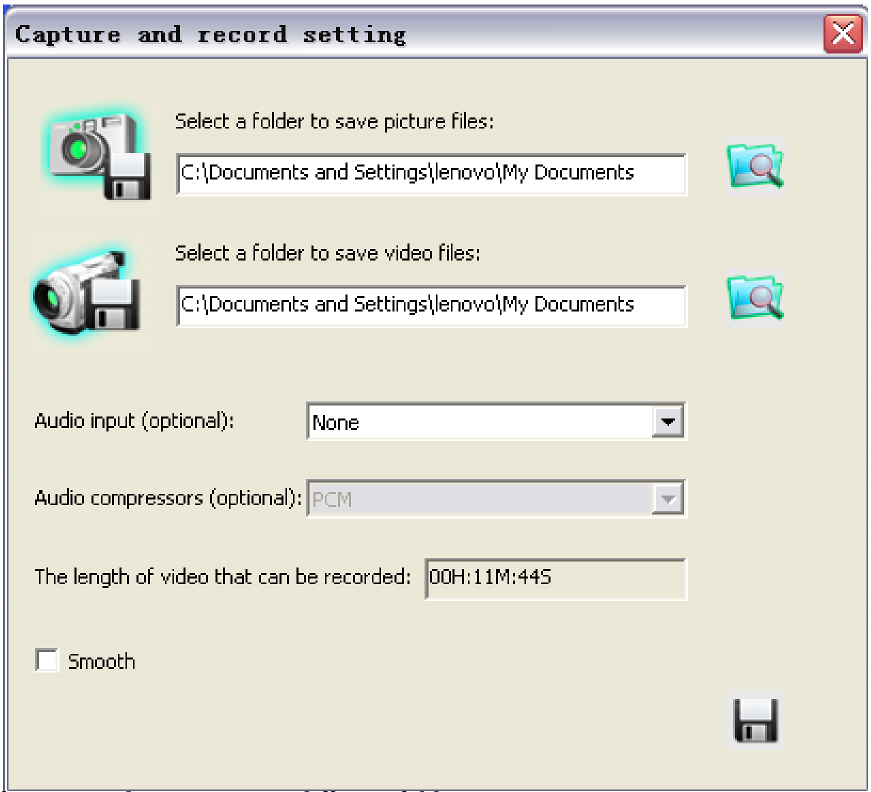
Left click on to capture images. The captured images will be automatically saved into the default destination folder. The path and file name are displayed in software status bar on the bottom of the window. Shown below:



Left click on to start recording. The setting button will changes to and does not work. The detailed information is displayed on the software status bar in the bottom of the window. The video is automatically saved in the default folder or pre-set folder.

7.2.7. SETTING

The captured images and recorded videos will be saved into the folders of Images and Videos respectively, which are created by the system automatically. To set a different path to which the image/video is be to saved, click on  on the left side of the window, a pop up dialog box appears below.



Save the captured images into a different folder

Click on the button next to the "select a folder to save picture files" text box to set the path for captured images.

Save the recorded video into a different folder and set up parameters for videos

Click on the button next to the "Select a folder to save video files:" text box to set the path for videos. You can also change the video settings. The Audio input (optional) drop down box offers the options of recording video with or without sound. Shown below:



The length of video that can be recorded box displays the longest recording time for videos to be saved in the preset path. Shown below:



Click on **Save** to complete.

7.2.8. IMAGE MODIFY

Click on , you will see the interface:

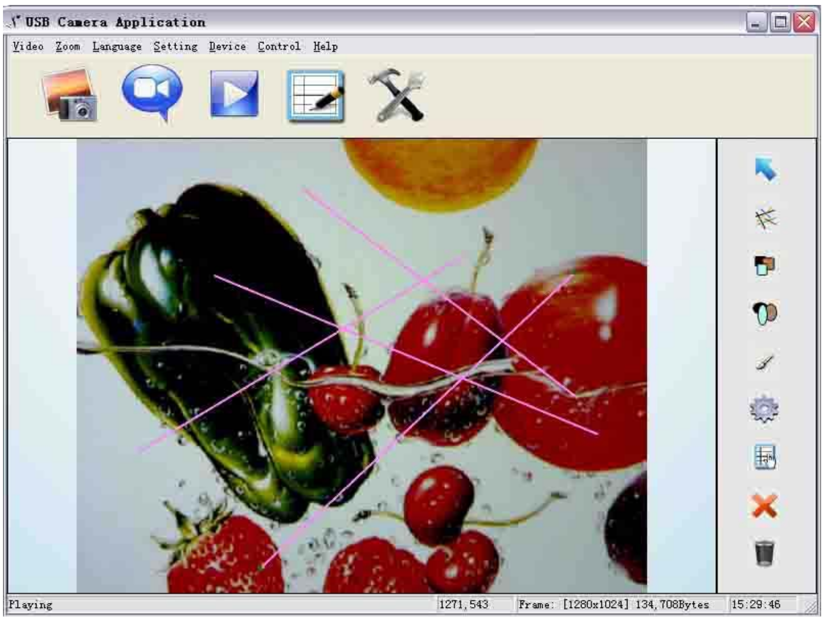


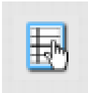
- *Grapic selection and move*

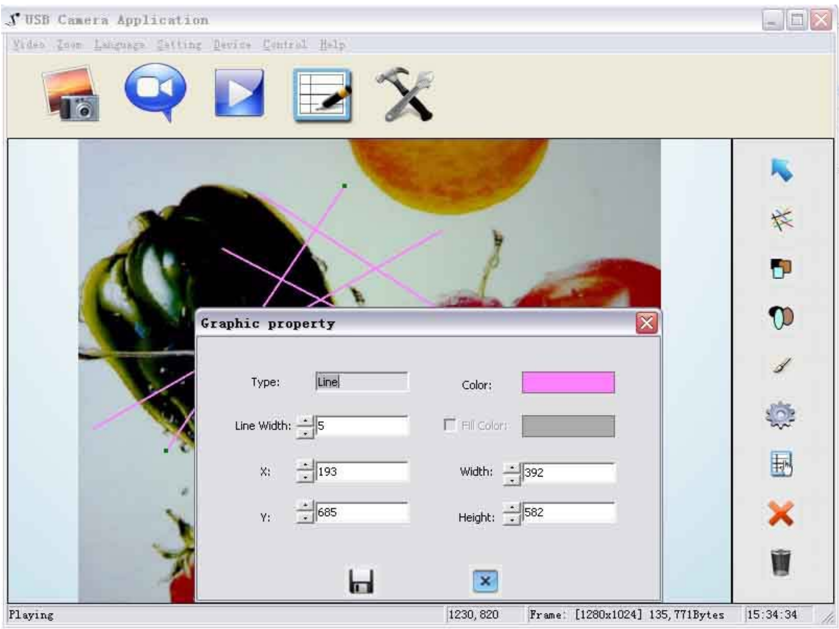
  Click on  to choose a line, circle, rectangle or curve that placed in the image, then move to another place.

- *Line*

  Click on  to place a beeline in the image, shown as below:



Click on  to change the setting of the chosen line:



Line width: change the width of the line.

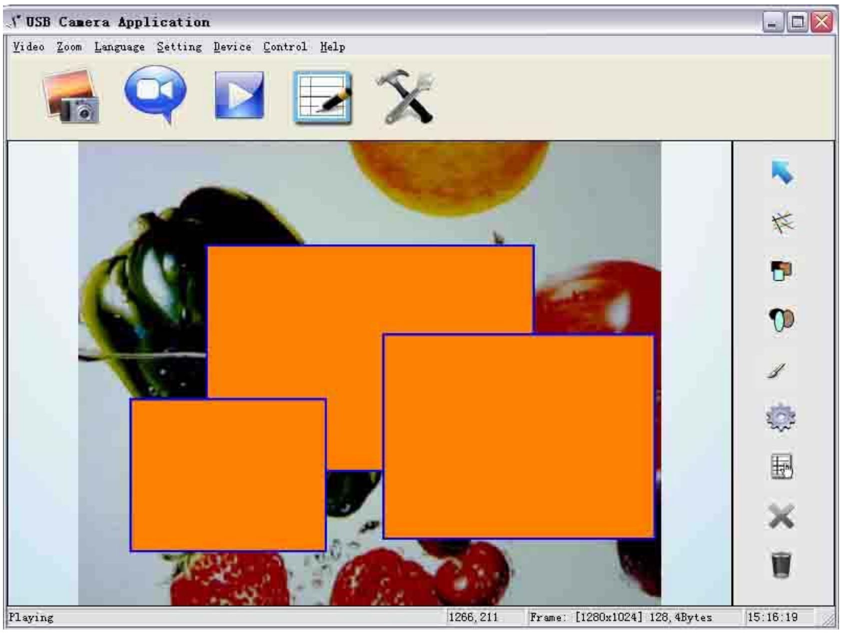
X, Y: change the position of the line.

Color: change the color of the line.

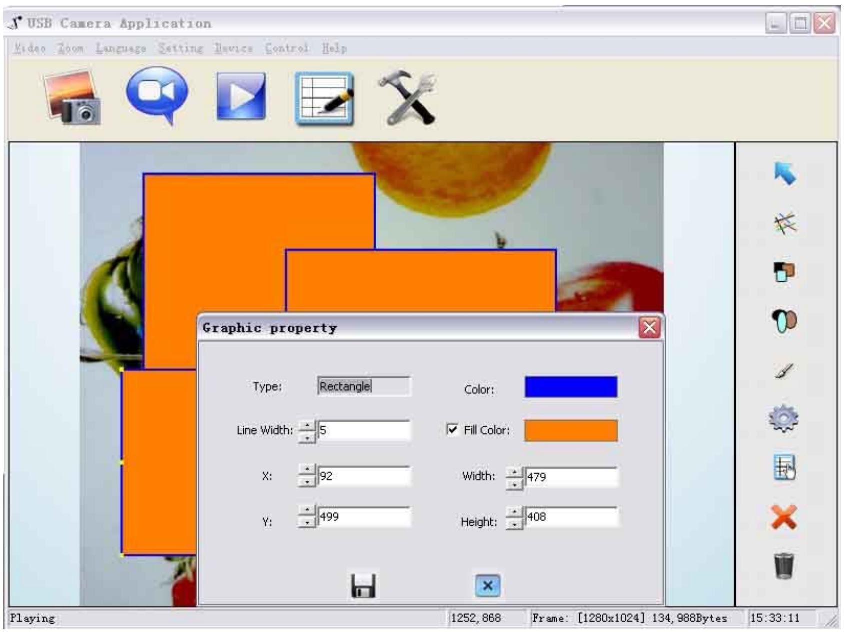
Width, Height: Change the angle of the line.

- *Rectangle*

Click on  to place a rectangle in the image, shown as below:



Click on  to change the setting of the chosen rectangle:



Line width: change the line width of the rectangle.

X, Y: change the position of the rectangle.

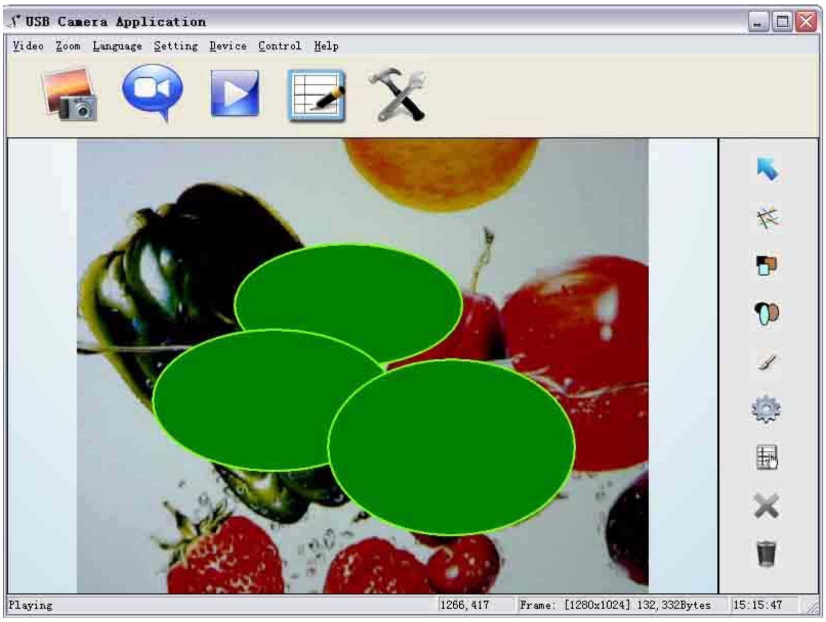
Color: change the line color of the rectangle.

Fill Color: Tick it to fill color in the rectangle.

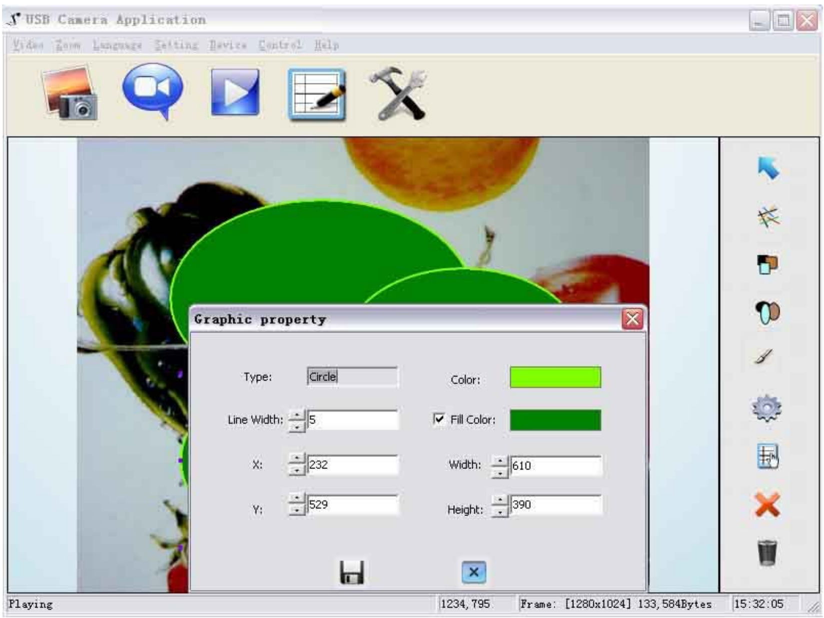
Width, Height: Change the shape of the rectangle by changing the angle of two adjacent lines of the rectangle.

- *Circle*

Click on  to place a circle in the image, shown as below:



Click on  to change the setting of the chosen circle:



Line width: change the line width of the circle.

X, Y: change the position of the circle.

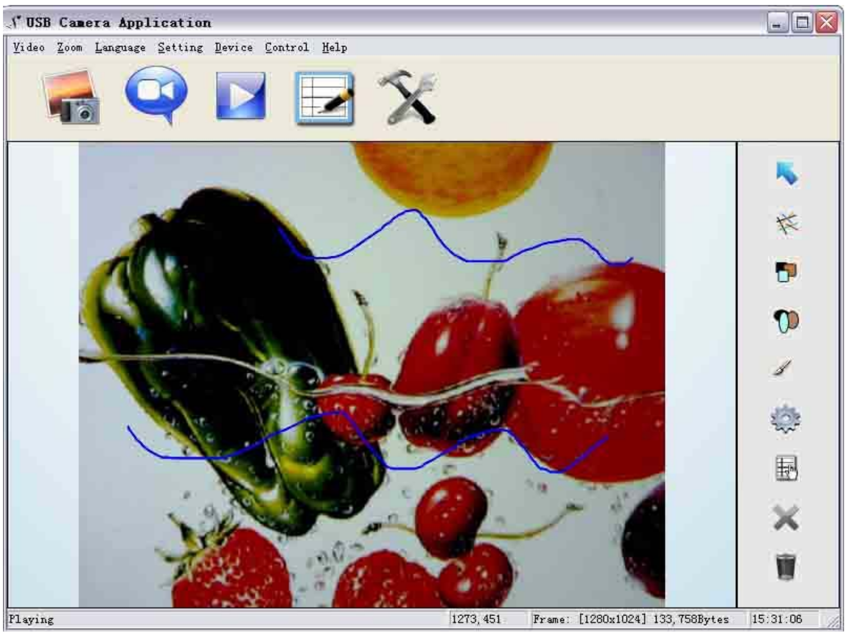
Color: change the line color of the circle.

Fill Color: Tick it to fill color in the circle.

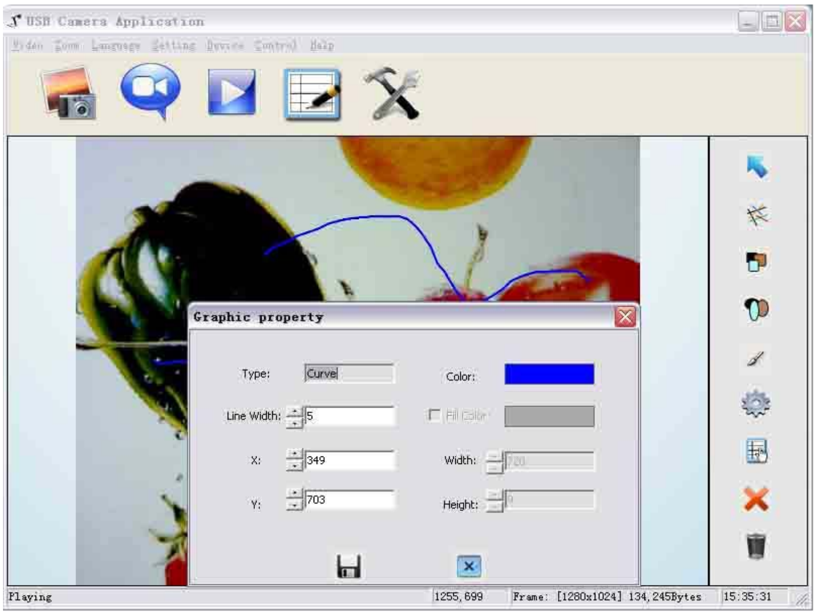
Width, Height: change the size of the circle.

- *Curve*

Click on  to place a curve in the image, shown as below:



Click on  to change the setting of the chosen curve:



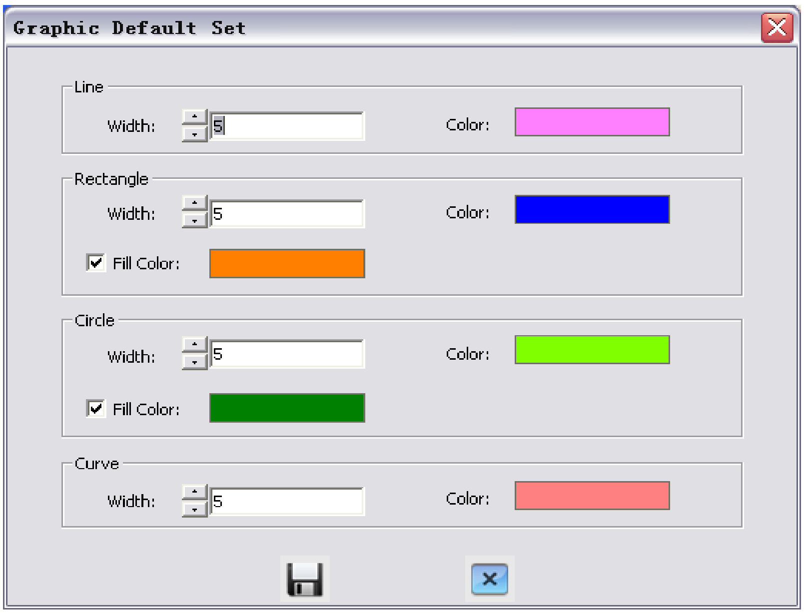
Line width: change the line width of the curve.

X, Y: change the position of the curve.

Color: change the line color of the curve.

- *Graphic default setting*

Click on  to change the setting of the graphic:



- *Graphic delete*

Click on  to delete the chosen graphic.

- *Delete all graphics*

  Click on  to delete all graphics placed in the image.

8. FEATURES

LIGHT

Press “**LAMP**” to toggle arm light, back light & no light.

ZOOM IN AND ZOOM OUT

Press "**ZOOM+"or "ZOOM-"**

POSITIVE/NEGATIVE CONVERSION

Press the **Neg** button on the remote control, the output image will be converted to negative color. Press it again, the output image will be converted back to original color.

FOCUS ADJUSTMENT

When the DV 550S is turned on the focus automatically adjusts to the stage, it is usually not necessary to re-adjust the focus if you are only working with flat materials (text, photos, etc.). Only 3D objects require a focus adjustment. Press the **“AUTO”** button to auto focus. Press the
"**FOCUS+"** or **"FOCUS-"** button to focus manually.

BRIGHTNESS ADJUSTMENT

If the image effect is not satisfactory, you can adjust the brightness to get a better image effect. Use the **“BRIGHT+”** or **“BRIGHT-”** button to adjust the brightness.

WHITE BALANCE ADJUSTMENT

Each time the lighting condition changes, the user should adjust the white balance of the image. Press the **“AUTO”** button to adjust the white balance automatically.

IMAGE FREEZE

The freeze function allows you to discretely prepare the next image without interrupting current presentation. Press "**Freeze"** on the remote control to freeze and unfreeze the image.

IMAGE ROTATE

Press **"Rotate"** on the remote control to rotate the image by 90°, 180°, 270°.

SPLIT SCREEN

Press **"SPLIT"** to compare two images or compare two different views of one object side by side.

TITLE FUNCTION

Press "**TITLE**" to enable the title function.

PICTURE IN PICTURE FUNCTION

Press "**PIP**" on remote control to active the picture in picture function.

IMAGE SAVE

The DV 550S offers the opportunity of storing 400 images on board. Press "**SAVE"** to capture the image displayed.

IMAGE RECALL

To display saved images,

(a) press "**RECALL**" button, thumbnails of saved images are displayed;

(b) use "**Page+**", "**Page-**" and arrow keys to select a desired image;

(c) press **Menu Enter** button to display the selected image.

RGB INPUT SWITCH

Press the "**PC 1/2**" to toggle between the two VGA input signals.

OUTPUT SWITCH

Use "**Video 1/2**" to switch between Composite Video & S-Video signals.

USB IMAGE CAPTURE AND VIDEO RECORDING

USB 2.0 PORT

The USB port can be used to capture still images from the DV 550S into a computer. In this way, the DV 550Scan be used as a 3-D scanner for your computer.

Connect the DV 550S to your computer with the supplied USB cable. The capture software is available on the supplied CD-ROM.

RS232 CONTROL

The RS232 terminal allows you to integrate the DV 550S into any sophisticated central control system. RS232 also enables you to control the DV 550S via a computer.

9. SPECIFICATION

Model	**DV 550S**
Sensor	1/3" CMOS
Pixels	2 Megapixel
Zoom	8x optical, 12x digital
Frame rate	15
Shooting area	Max: 13.5" x 10.6" / 34.3 cm x 26.9 cm Min: 0.1" x 0.1"/ 0.3 cm x 0.3 cm
Focus	Auto/manual
Output resolution	XGA，SXGA, WXGA
Resolution(Horizontal)	≥750 TV lines
White balance	Auto/manual
Color adjustment	Yes
Brightness adjustment	Yes
Negative&Positive conversion	Yes
Image capture	Yes, 400 NON-volatile images
Video recording	Yes(via USB)
Image rotation	90°, 180°, 270°
Image split	Yes
Image freeze	Yes
Picture in picture	Yes
Title	Yes
OSD	Yes
Menu	Yes
Inputs	VGA ×2, AUDIO ×1, C-VIDEO ×1, S-VIDEO ×1, MIC×1
Outputs	VGA ×2, C-VIDEO ×1, S-VIDEO ×1, AUDIO ×1, DVI ×1
USB2.0	Slave×1(USB camera), Host×1
RS232	x1(computer controllable)

Remote control	Yes(360°controllable)
Light source	Top Arm Light×1 (LED), 10” x 8” Lightbox (LED)
Kensington lock	Yes
Operating temperature	32°F ~113°F
Dimensions	Folded:19.48"×14.56"×5", Setup: 21.25"×14.56"×21.25"
Power supply	12V DC power adapter
Weight(net)	11lbs/5kg

10. TROUBLE-SHOOTING:

Symptoms	Possible causes/counter-measures
No image	1. Power cord is not properly connected. 2. Cables are not properly connected. 3. Power switch is not turned on. 4. Change the output resolution.
Image bending	1. Camera not in right position, adjust the camera. 2. Distortion of LCD display, press the “Auto adjust” of the LCD.
Out of focus or blurring image	1. The object is too close to the lens. 2. Focus is on the top point of zoom, press ZOOM-. 3. Auto-focus is not on: press AUTO again. 4. Fog on the lens in damp climate. It will disappear gradually when the equipment warms up.

11. PACKING LIST

Item	Quantity
Power cord	1
Power adaptor(12V/2A)	1
VGA cable	1
S-Video cable	1
Video cable with RCA	1
RCA to mini adapter	1
Mini jack audio cable	1
USB cable(2.0)	1
RS232 cable	1
Remote control	1
User manual(CD)	1

12. TECHNICAL SUPPORT

Wanin USA is committed to providing highest possible stand of customer service. We can be reached:

By Phone

Call us at 1-877-369-3130. Our technical support staff provides technical assistance from 9:00AM through 5:00PM Pacific Standard Time, Monday through Friday. Please gather the following information before calling:

- Product model name(s) and numbers
- Product serial number(s)
- Detailed questions or problem descriptions.

Online

Technical support is also available online at Wanin USA's web site at www.waninusa.com. You can enter your questions and concerns through our online form, email us at support@waninusa.com.

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